U.S. FISH AND WILDLIFE SERVICE
SPECIES ASSESSMENT AND LISTING PRIORITY ASSIGNMENT FORM

SCIENTIFIC NAME: *Platanthera integrilabia* (Correll) Leur

COMMON NAME: white fringeless orchid

LEAD REGION: 4

INFORMATION CURRENT AS OF: March 2010

STATUS/ACTION:
___ Species assessment - determined we do not have sufficient information on file to support a proposal to list the species and, therefore, it was not elevated to Candidate status
__ New candidate
_X_ Continuing candidate
___ Non-petitioned
_X_ Petitioned - Date petition received: May 11, 2004
__ 90-day positive - FR date:
__ 12-month warranted but precluded - FR date:
__ Did the petition request a reclassification of a listed species?
FOR PETITIONED CANDIDATE SPECIES:
a. Is listing warranted (if yes, see summary of threats below)?
b. To date, has publication of a proposal to list been precluded by other higher priority listing actions? Yes
c. If the answer to a. and b. is "yes", provide an explanation of why the action is precluded. Higher priority listing actions, including court-approved settlements, court-ordered and statutory deadlines for petition findings and listing determinations, emergency listing determinations, and responses to litigation, continue to preclude the proposed and final listing rules for the species. We continue to monitor populations and will change its status or implement an emergency listing if necessary. The "Progress on Revising the Lists" section of the current CNOR (*http://endangered.fws.gov/*) provides information on listing actions taken during the last 12 months.

Date when the species first became a Candidate (as currently defined): 10/25/1999

___ Candidate removal: Former LPN: ___
___ A – Taxon is more abundant or widespread than previously believed or not subject to the degree of threats sufficient to warrant issuance of a proposed listing or continuance of candidate status.
___U – Taxon not subject to the degree of threats sufficient to warrant issuance of a proposed listing or continuance of candidate status due, in part or totally, to conservation efforts that remove or reduce the threats to the species.
___ F – Range is no longer a U.S. territory.
___ I – Insufficient information exists on biological vulnerability and threats to support

listing.
___ M – Taxon mistakenly included in past notice of review.
___ N – Taxon does not meet the Act's definition of "species."
___ X – Taxon believed to be extinct.

ANIMAL/PLANT GROUP AND FAMILY: Flowering Plants - Orchidaceae

HISTORICAL STATES/TERRITORIES/COUNTRIES OF OCCURRENCE: Alabama, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee, Virginia

CURRENT STATES/COUNTIES/TERRITORIES/COUNTRIES OF OCCURRENCE: Alabama, Georgia, Kentucky, Mississippi, South Carolina, Tennessee

LAND OWNERSHIP:
Exact percentages of land ownership have not been revised in several years, and must await a review of updated site (spatial) data from all appropriate state Natural Heritage Programs. These data were not available for all states at the time of the 2010 update to this document. Therefore, approximate percentages are as follows: Federal (U.S. Forest Service, U. S. Fish and Wildlife Service, National Park Service) 20 percent, State (Kentucky Nature Preserves Commission (KSNPC), South Carolina State Parks, Tennessee State Parks and State Forests) 10 percent, and private 70 percent.

LEAD REGION CONTACT: Southeast Regional Office, Rob Tawes, 404-679-7142, *robert_tawes@fws.gov*

LEAD FIELD OFFICE CONTACT: Cookeville, Tennessee Field Office, Geoff Call, 931-528-6481, ext. 213, *geoff_call@fws.gov*

BIOLOGICAL INFORMATION:

Species Description
White fringeless orchid was first recognized as a distinct taxon in 1941 when D.S. Correll described this plant as a subspecies of *Habenaria* (*Platanthera*) *blephariglottis* (Correll 1941, pages 153-157). C.A. Leur elevated the taxon to full species status in 1975 (Leur 1975, page 186). The currently accepted binomial for the species is *Platanthera integrilabia* (Correll) Leur.

White fringeless orchid is a perennial herb with a light green, 60 centimeter (cm) (23 inches (in)) long, stem that arises from a tuber. The leaves are alternate with entire margins and are narrowly elliptic to lanceolate in shape. The lower leaves are 20 cm (8 in) long and 3 cm (1 in) wide. The upper stem leaves are much smaller. The white flowers are borne in a loose cluster at the end of the stem. The upper two flower petals are about 7 millimeters (mm) (0.3 in) long and the lower petal (the lip) is about 13 mm (0.5 in) long. The plants flower from late July through September and the small narrow fruiting capsule matures in October (Shea 1992, page 23).

Habitat

Platanthera integrilabia grows in wet, boggy areas at the heads of streams and on seepage slopes. It is often associated with *Sphagnum* in partially, but not fully, shaded areas.

Historical Range/Distribution

The species was originally known from Alabama, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee, and Virginia. It has been extirpated from North Carolina (Henderson and Cherokee Counties) and Virginia (Lee County).

Current Range/Distribution

The species currently occurs within the Appalachian Plateau Physiographic Province in Kentucky, Tennessee, and Alabama, the Coastal Plain Physiographic Province in Alabama and Mississippi, and the Blue Ridge Province in Georgia and Tennessee (Shea 1992, page 19). Unless otherwise noted, the following summary of the current distribution of known or presumed extant sites for the species is from Medley (1980), Shea (1992), White (1998, pers. com. 1999), A. Shea (pers. com. 1999), and McCoy (2008).

Alabama currently supports eight occurrences of *P. integrilabia* in the following counties: Calhoun (2), Claiborne (1), Jackson (1), Marion (2), Tuscaloosa (1), and Winston (1). The two sites in Calhoun County occur on the U. S. Fish and Wildlife Service's Mountain Longleaf National Wildlife Refuge. The Claiborne County site occurs on lands managed by Talladega National Forest. The remaining sites in the state occur on privately owned lands.

Georgia currently supports eight occurrences of *P. integrilabia*, in the following counties: Carroll (2), Chattooga (1), Cobb (1), Coweta (1), Forsyth (1), Rabun (1) and Stephens (1). The only federally owned site is in Stephens County on the Chattahoochee National Forest. All remaining sites occur on privately owned lands.

Kentucky supports nine occurrences and is the only state where a majority of the sites are under federal ownership. The following counties contain sites for the species: McCreary (2 sites), Pulaski (2), and Whitley County (1). All but one of these occurrences are on lands managed by the US Forest Service.

Mississippi contains two extant occurrences for the species, both in Tishomingo County (C. Norquist pers. com. 2007). We do not have current ownership information for these occurrences.

South Carolina contains a single occurrence, last observed in 1989 and presumed extant as of the 2010 update to this document (B. Pitman, pers. com., 2007, 2008 and 2010). This site is on land owned by the state.

Tennessee contains the majority of known sites across the species' range, with 33 known or presumed extant occurrences distributed among the following counties: Bledsoe (3), Cumberland (1), Franklin (6), Grundy (5), Grundy-Sequatichie County line (1), Marion (7), McMinn-Monroe County line (1), Polk (1), Sequatchie (1), Van Buren (4) and Van Buren-Warren County line (1). Two of the sites, one each in Scott and Fentress counties, are located on lands within Big South Fork National Scenic River and Recreation Area, a National Park Service unit (McCoy pers. com. 2010). Biologists with the Tennessee Valley Authority found one of the three Bledsoe

County populations during a survey of a transmission line right-of-way (A. Datillo pers. com. 2010).

Historical vs. Current Population Size Estimates

Historically, there were at least 90 populations of *P. integrilabia*. Today the species is known or presumed extant at some 50 sites across its range (NatureServe 2009). The majority of known sites consist of fewer than 100 plants, although some sites have been reported to contain 500-1000 plants at some point in their history. Reports of sites containing over 1000 plants are not unprecedented, but are rare.

Direct comparisons of historical and current population size estimates are difficult for the majority of known sites, in that observations are frequently reported as flowering stems one year, and vegetative plants the next, with many years elapsing in between observations made by different individuals. Also complicating direct comparisons within sites among years is the fact that conclusive identification of *P. integrilabia* requires flowers – therefore vegetative counts (depending upon the observer's familiarity with the species) may be suspect and could potentially include other species of *Plantanthera* which sometimes co-occur with *P. integrilabia*.

Nonetheless, some apparent trends form the basis of sustained and some heightened concerns about the species' status. In Alabama, declines have been reported at three of eight known sites, and a fourth has not been observed despite repeated surveys (A. Schotz pers. com. 2009; S. Miller pers. com. 2008). The remaining four sites in this state have not been observed since the early 1990s (A. Schotz, pers. com., 2009). In Kentucky, D. White (pers. com., 2005 and 2007) reported declines across most of the eight known populations in that state, often with no clear indication of what had caused the decline. In both years, White speculated that a combination of invasive plants, poor land use practices upstream or upslope, herbivory and drought may be affecting these populations. However, D. White (pers. com., 2009) later provided the following synopsis: "while there is concern about the degrading habitat where these plants occur, the site ranks have not significantly declined [with the exception of] (one site); populations are at about the same level of viability as ten years ago."

Staff from the Tennessee Natural Heritage Program visited 41 of 48 previously known element occurrence records in 2007 and observed the following (McCoy 2008, pp. 1-4):

- Of the 30 occurrences whose numbers could be compared to previous years' numbers, 25 (83%) exhibited a decrease in flowering and vegetative plants; in some populations, decreases have been consistently observed since their initial discovery.
- Five occurrences were confirmed or suspected extirpated (Element Occurrence (EO) rank of "X" or "X?"); five occurrences were not found despite surveys (EO rank of "F"); eight additional locations were considered historical (EO rank of "H" or "H?").

As of the 2009 update to this document, recent observation data were not available for the eight known sites in Georgia. The single known population in South Carolina has not been observed since 1989 (B. Pittman, pers. com., 2009 and 2010) but is presumed extant for purposes of this review.

THREATS

A. The present or threatened destruction, modification, or curtailment of its habitat or range.

Shea (1992, pp. 25-28) reported that several populations have been lost to habitat altering activities such as road construction, residential and commercial construction, and soil and site hydrology altering projects that reduced site suitability for the species. She estimated that these activities continued to threaten at least 50 percent of the remaining populations in 1992. In Tennessee, three of 48 known occurrences have been extirpated from the construction of small private lakes (McCoy 2008, p. 3). Several of the known populations are in or adjacent to powerline rights-of-way. Mechanical clearing of these areas may benefit the species by maintaining adequate light levels; however, the indiscriminant use of herbicides could pose a significant threat to the species. In an early status survey, Shea assessed all-terrain vehicles as a threat to several sites (Shea, 1992, p. 28); this author specifically identified ATVs as the cause of loss or damage to plants at three sites in Tennessee, and identified ATVs as a potential threat at three additional sites across the species' range. White (1998, pp. 1-3) noted that most of the known sites for the species occur in areas that are managed specifically for timber production. Timber management is not necessarily incompatible with the protection and management of *P. integrilabia*. However, during timber operations, care must be taken to ensure that the hydrology of the bogs that support the species is not altered, that any heavy equipment used is kept out of the species' habitat, and that the vegetation is managed in a manner that maintains suitable light and moisture conditions. Natural succession can result in decreased light levels. This decrease can initially cause reduced vigor, flowering, and reproduction. If allowed to continue, canopy closure can make a site unsuitable for this species. Loss of sites to residential and other construction activities remains a threat to most of the privately owned populations not managed for conservation. D. White (pers. com. 2005) reported that five of 28 populations were declining apparently due to erosion of adjacent stream banks. This erosion appeared to have been caused by increase water flows from clear-cut areas upstream of the populations. The erosion seemed to have lowered the streambed which resulted in water moving off the sites supporting the plants more quickly resulting in drier sites.

B. Overutilization for commercial, recreational, scientific, or educational purposes.

Zettler and Fairey (1990, p. 216) report that poaching and legal collection for commercial and other purposes is a threat to *P. integrilabia*. Shea (1992, p. 27) reports that the species may have been extirpated from its type locality by collecting and previously at least two Tennessee nurseries sold plants collected from wild populations. Because of the small size of many populations, collecting, even for scientific purposes, could easily extirpate the species from many areas; however, we do not have any current information on the imminence or magnitude of this threat.

C. Disease or predation.

Zettler and Fairey (1990, pp. 214, 216) stated that both herbivory and disease threaten this species. They reported herbivore damage to *P. integrilabia*, ranging from 11 percent to almost 24 percent of the plants present at the South Carolina and Georgia sites studied. They also noted plant damage caused by several fungal pathogens. White (1998, p. 2) reported that herbivory

(primarily deer) continues to threaten the species at several sites, and that at one site it is threatened by wild boar rooting. Deer herbivory upon leaves lowers overall plant vigor, and when targeted at inflorescences will reduce or eliminate reproduction by seed. This is a potentially significant threat to *P. integrilabia* populations considering the low rates of successful sexual reproduction observed in the species (Zettler and Fairey 1990, pp. 212-216) and the evidence that many populations have undergone long-term declines (McCoy 2008, p. 3). The largest known population of *P. integrilabia*, located in the Cherokee National Forest in Tennessee, has suffered damage from feral hogs. The U.S. Forest Service erected an exclusion fence around much of this population, but this fence was found to be in disrepair in 2002 and approximately 50 percent of the flowering plants at the site had been uprooted. However, fence maintenance has been a priority at the site, and, despite the disturbance this population has remained relatively stable since monitoring began in 1996 (United States Department of Agriculture, Forest Service 2008, pp. 53-54).

D. The inadequacy of existing regulatory mechanisms.

Some of the sites supporting *P. integrilabia* are under the jurisdiction of state and federal wetlands protection regulations such as those developed under the Clean Water Act. However, because of their size and isolation from larger aquatic systems, most sites are not under the jurisdiction of these programs. Additionally, many of the activities that threaten the species would take place in areas adjacent to, rather than in, the bogs supporting the species and, therefore, are not subject to wetlands regulations regardless of the size or location of the wetland.

Of the states with extant populations of *P. integrilabia*, only Tennessee and Georgia have legislation that provides some protection for the species at the state level. The law that provides official protection to designated species of plants in Tennessee is the Tennessee Rare Plant Protection Act of 1985 (T.C.A. 11-26-201), which forbids persons from knowingly uprooting, digging, taking, removing, damaging, destroying, possessing, or otherwise disturbing for any purpose, any endangered species from private or public lands without the written permission of the landowner. The law that provides official protection to designated species of plants in Georgia is known as the Wildflower Preservation Act of 1973. Under this law, no protected plant may be collected without written landowner permission. No protected plant may be transported within Georgia without a transport tag with a permit number affixed. Permits are also used to regulate a wide array of conservation activities, including plant rescues, sale of protected species, and propagation efforts for augmentation of natural populations and establishment of new ones. No protected plants may be collected from state-owned lands without the express permission of the Georgia Department of Natural Resources. The Georgia Environmental Policy Act (GEPA), enacted in 1991, requires that impacts to protected species be addressed for all projects on state-owned lands, and for all projects undertaken by a municipality or county if funded half or more by state funds, or by a state grant of more than $250,000. The provisions of GEPA do not apply to actions of non-governmental entities. On private lands, the landowner has ultimate authority on what protection efforts, if any, occur with regard to protected plants (Patrick et al. 1995, p. 1 of section titled "Legal Overview").

Because *P.integrilabia* receives no protection under state laws other than in Georgia and Tennessee, and these states' laws protecting plants do not forbid destruction of plants on private

lands with landowner consent, we conclude that inadequacy of existing regulatory mechanisms is a threat to the species.

E. Other natural or manmade factors affecting its continued existence.

Little, if any, vegetative reproduction takes place in *P. integrilabia*, and it is apparently primarily dependent upon sexual reproduction. Zettler and Fairey (1990, pp. 212-216) reported that only 2.8 percent to 4.6 percent of the plants within a population flower in any given year and of these, only 6.9 percent to 20.3 percent will set seed. This results in a very low production of seeds and, consequently, a limited ability to reproduce at most sites. Low reproductive potential combined with often small population sizes, likely contributes to low (potentially negative) population growth rates and increases potential for inbreeding depression and genetic bottlenecks. As noted above, herbivory (especially when targeted upon inflorescences, as is often the case) would further compound the threat of low reproductive potential and low seed set.

White (1998, p. 3) notes that the recovery of this species will be dependent upon active habitat management rather than just habitat preservation. Because of the species' dependence upon moderate to high light levels, some type of active management to prevent complete canopy closure is required at most locations. Invasive nonnative plants such as Japanese honeysuckle (*Lonicera japonica*), kudzu (*Pueraria lobata*), and Japanese stilt grass (*Microstegium vimineum*) threaten several sites and, if left uncontrolled, can extirpate the species (Zettler and Fairey 1990, page 213). These species, due to their aggressive growth habit and capacity for prolific reproduction, compete with *P. integrilabia* for sunlight, soil nutrients, and safe sites for seedling germination.

Standardized, routine population monitoring is lacking for the majority (> 99%) of sites across the species range. However, data from the respective state Natural Heritage programs suggests that sites can experience dramatic fluctuations in plant numbers, with sites reported to contain hundreds of vegetative or flowering plants one year, and fewer than a dozen (if any) plants in subsequent years. The fact that these observations have often been made by different observers and may represent varied levels of survey effort renders these apparent trends difficult to interpret. However, in the absence of more obvious forms of habitat alteration (e.g., impoundments, sedimentation or erosion, excessive competition from other vegetation), most observers have attributed dramatic population fluctuations to drought.

CONSERVATION MEASURES PLANNED OR IMPLEMENTED

The Nature Conservancy has registered one of the privately owned Grundy County, Tennessee, sites as a natural area. In 1980, this site supported 250 plants; however, the number of plants present in recent years has been greatly reduced (none were observed in 2008) and some active management of the site may be needed. One of the 12 sites in federal ownership is designated as a Botanical Area by the U.S. Forest Service (USDA 2008, pp. 53-55). The South Carolina site and 11 of the Tennessee sites are within state parks, forests, or wildlife management areas. This provides these sites with some degree of protection, but does not necessarily ensure that they will receive the management that may be needed to maintain the species.

Several years ago, the Service and the U.S. Forest Service initiated discussions on the feasibility

of developing a conservation agreement to protect *P. integrilabia*. No recent work has been devoted to this effort because of the large number of sites in private ownership and the inability to develop an agreement that would protect enough populations to ensure the long-term survival of the species. The U.S. Forest Service has recently purchased a Kentucky tract that supports *P. integrilabia* (D. White, pers. com., 2007).

The Service provided a grant to the KSNPC to develop site conservation plans for the higher quality *P. integrilabia* sites that remain in existence. A report containing conservation plans for 29 sites was prepared by White (1998, pp. 1-106). The threats to most sites and the active management needs identified in this report indicate that long-term protection of *P. integrilabia* can best be achieved through the federal listing process. Although federally listed plants receive only limited protections on privately owned lands, federal listing would confer a number of added conservation benefits. Federally funded, permitted or authorized actions affecting this species or its habitat (even on private lands) would be subject to Section 7 consultation with the Service. As such, activities affecting streams or wetlands containing this species and requiring a U.S. Army Corps permit would either have to be redesigned to avoid impacts to the species, or undergo consultation with the Service to ensure that the species' long-term viability is not jeopardized. Federal listing would also enable state agencies to compete for Section 6 Recovery Land Acquisition funding for the acquisition of properties containing the species and supporting its recovery.

The KSNPC recently purchased the privately owned Pulaski County site for the species and established a State Nature Preserve for the location (D. White, pers. com., 2007).

The U.S. Forest Service's Southern Region supported the elevation of this species to candidate status and has offered to work with us in protecting the populations that occur on Forest Service lands. The Natural Heritage Programs and/or state Plant Protection Programs in Alabama, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee, and Virginia were all contacted concerning elevation of this species to candidate status. All supported this effort and offered their assistance in protective efforts in the future.

Because *P. integrilabia* occurs in northeastern Mississippi, in 2009 staff from the Tennessee Natural Heritage Program searched potential habitats in the southern portion of Tennessee's Coastal Plain, specifically areas in Big Hill Pond State Park and Natchez Trace State Park and Forest. Although the species was not located in this area of Tennessee, staff identified suitable habitat and observed a number of plant species which are associated with *P. integrilabia*. Based on this inventory and other observations from the region, it is possible that populations exist in this region of Tennessee but have not yet been discovered (R. McCoy, pers. com., 2010)

The Calhoun County, Alabama, populations of this species are now part of the newly established Mountain Longleaf National Wildlife Refuge. This will provide permanent protection for these populations. However, one of these sites has not been observed (despite searches) in many years, and the other is notably reduced in number relative to historical levels. The Service's Asheville Field Office and Refuge personnel are actively engaged in discussions about appropriate management (and monitoring) needs at this site. In January 2010, refuge staff manually removed understory vegetation (i.e., less than four inches in diameter) from a portion of one site in order

to accommodate a search for unexploded ordnance (S. Miller, pers. com., 2010), which might prove beneficial to the *P. integrilabia* population.

SUMMARY OF THREATS:

Threats include drought, road construction, residential and commercial construction, impoundments, incompatible timber operations, incompatible vegetation maintenance in powerline rights-of-way, all-terrain vehicles, herbivory (primarily by deer), feral hogs, stream bank erosion, invasive exotic plant species, poaching and other forms of collection, and unchecked vegetation succession leading to canopy and sub-canopy closure. One or more of these threats has historically or is currently operating at the majority (likely more than 90%) of known occurrences across the species' range.

We find that this species is warranted for listing throughout all its range, and, therefore, find that it is unnecessary to analyze whether it is threatened or endangered in a significant portion of its range.

RECOMMENDED CONSERVATION MEASURES

Conservation measures are being implemented to protect the species in all states as outlined in previous sections. All states where the species is currently found supported the elevation of *P. integrilabia* to candidate status and the eventual federal listing as threatened or endangered. This species' recovery will depend upon protecting additional populations through acquisition or landowner management agreements, implementation of actions such as canopy thinning (at sites where vegetation succession appears to be a problem), control of invasive exotic plant species that may compete with *P. integrilabia*, and rangewide monitoring to track population trends and responses to management actions. Studies to evaluate genetic structure within and among populations of *P. integrilabia* are needed in order to assess the potential threats of inbreeding depression and genetic bottlenecks posed by small population sizes and low reproductive rates.

LISTING PRIORITY

THREAT			
Magnitude	Immediacy	Taxonomy	Priority
High	Imminent	Monotypic genus	1
		Species	2
		Subspecies/population	3
	Non-imminent	Monotypic genus	4
		Species	5
		Subspecies/population	6
Moderate to Low	**Imminent**	Monotypic genus	7
		Species	**8***
		Subspecies/population	9
	Non-imminent	Monotypic genus	10
		Species	11
		Subspecies/population	12

Rationale for listing priority number:

Magnitude:
Reported threats include drought, road construction, residential and commercial construction, impoundments, incompatible timber operations, incompatible vegetation maintenance in powerline rights-of-way, all-terrain vehicles, herbivory (primarily by deer), feral hogs, stream bank erosion, invasive exotic plant species, poaching and other forms of collection, and unchecked vegetation succession leading to canopy and sub-canopy closure. One or more of these threats has been identified as a contributing factor in apparent population declines reported at sites across the species range (Shea 1992, White 1998, McCoy 2008, USDA 2008). However, as noted above, available estimates of population size can be difficult to interpret because they have been made by different observers, are spaced several years apart, and/or represent inconsistent levels of survey effort (area covered per unit of time). At this time we continue to find this species in need of federal listing, but do not find that available data suggest permanent, precipitous declines in existing populations. Therefore, we have determined that the magnitude of identified threats is moderate.

Imminence:
Identified threats to the species currently are affecting or have adversely affected the status of the species throughout its range; therefore we find these threats to be imminent.

Yes Have you promptly reviewed all of the information received regarding the species for the purpose of determining whether emergency listing is needed?

Is Emergency Listing Warranted? No – see above discussion. The threats faced by this species are significant, however, it is not anticipated that a significant number of the known populations

will succumb to (become extirpated by) these threats in the immediate future (next 1-2 years).

DESCRIPTION OF MONITORING State agencies responsible for plant protection, the U.S. Forest Service and the Service monitor sites supporting the species when time is available for this activity. Funds specifically designated for range-wide monitoring are currently not available to the states or the Service.

COORDINATION WITH STATES
Indicate which state(s) (within the range of the species) provided information or comments on the species or latest species assessment: All states have provided comments at one point or another in subsequent revisions to this document. Kentucky, South Carolina and Tennessee provided comments during the 2010 assessment.

This species is not included in the State Wildlife Action Plans for Alabama (2005), Kentucky (2005), Mississippi (2005), North Carolina (2005), South Carolina (2005), Tennessee (2005) and Virginia (2005). It is included in the State Wildlife Action Plan for Georgia (2005).

Indicate which state(s) did not provide any information or comments: Georgia, Alabama, North Carolina, Virginia, and Mississippi did not provide comments during the 2010 assessment.

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APPROVAL/CONCURRENCE: Lead Regions must obtain written concurrence from all other Regions within the range of the species before recommending changes, including elevations or removals from candidate status and listing priority changes; the Regional Director must approve all such recommendations. The Director must concur on all resubmitted 12-month petition findings, additions or removal of species from candidate status, and listing priority changes.

Approve: _____ June 15, 2010__
for Regional Director, Fish and Wildlife Service Date

Concur: _____ Date: October 22, 2010
ACTING
Director, Fish and Wildlife Service

Do Not Concur: _____ _____
Director, Fish and Wildlife Service Date

Director's Remarks:

Date of annual review: March 30, 2010
Conducted by: Geoff Call, Fish and Wildlife Biologist, Cookeville, Tennessee Field Office